

WORK EXPERIENCE

01/02/2024 – CURRENT Madrid, Spain

ASSOCIATE PROFESSOR UNIVERSIDAD POLITÉCNICA DE MADRID

Coordinator of the courses of Software Architecture Design and Data Visualization. Professor of the courses of Project Management and Advanced Databases. Tutor and mentoring of students for final degree project, master thesis and PhD thesis.

15/05/2022 – CURRENT Brussels, Belgium

EVALUATOR AND RAPPORTEUR OF SINGLE STAGE PROJECT PROPOSAL EU COMMISSION

Evaluator for the European Commission of project proposals. Evaluation of Excellence, Impact and Implementation section, organization of Consensus Meeting, lump sum budgets, Contribution to 4 evaluations calls (HORIZON-HLTH-2022-IND-13-02, HORIZON-HLTH-2023-TOOL-05, HORIZON-HLTH-2024-DISEASE-03-14 two stage and HORIZON-HLTH-2024-DISEASE-03-08-two-stage).

31/12/2015 – CURRENT Madrid, Spain

SENIOR RESEARCHER / PROJECT MANAGER - DIGITAL HEALTH AND WELLBEING, UNIVERSIDAD POLITÉCNICA DE MADRID

I'm responsible to coordinate multidisciplinary teams to execute projects in the area of digital health in the field of:

1. Mobile Interventions to promote physical and mental health in patients, healthy or at risk population to promote behaviour change (nutrition, physical activity, mental wellbeing, emotional control, promotion of sleep hygiene, self-management of chronic diseases, rehabilitation processes).
2. Complex architecture design leveraging on current technological trends as: Big data, Internet of Things devices and medical devices, clinical health records and mobile apps, genetic and genomic information.
3. Decision support systems to define diagnostic and prognostic tools for health professionals and tools to foster the self-management process in users, or tools to help policy makers to assess at population level the effect of an intervention.

I'm also working on the research strategy of the research group by:

- Defining a middle and long term strategy of R&D activities and matching with external collaboration and grant application.
- Preparation of new proposals at national and European level.
- Maintaining a network of stakeholders involved in the field of digital health.

I've been involved in the different phases of the research projects: from the conceptualization, grant proposal preparation, grant signature, project execution in all the phases leveraging of my educational background on bioengineering to be able to support all the phases of a R&I project in the field of digital health: from design, to development to the clinical validation with a proper health technology assessment process and finally to the exploitation, dissemination and sustainability activities.

01/10/2022 – CURRENT Pavia, Italy

CONTRACT PROFESSOR UNIVERSITÀ DEGLI STUDI DI PAVIA

Professor of the course of Telemedicine of the Master degree "Medicine Enhanced by Engineering Technologies (MEET)" of the faculty of Medicine (3 ECTS credits).

31/03/2022 – 31/01/2024 Madrid, Spain

ASSISTANT PROFESSOR UNIVERSIDAD POLITÉCNICA DE MADRID

Assistant Professor in the technical school of Computer Science (E.T.S.I.S.I.) of UPM. Knowledge area: artificial intelligence and computational science. Courses: project management, advanced databases, design of system architecture, data visualisation. Collaborator of the Master Course of Bioengineering at Telecommunication School of UPM (E.T.S.I.T.) in the course of Telemedicine. I'm also tutor of master degree projects of MSc, Master and PhD Thesis and visiting students.

30/06/2015 – CURRENT Madrid, Spain

DIGITAL HEALTH EXPERT FREELANCE

I provide consultancy and expertise to Spanish institutions in Spanish and European projects. Clients: Hospital 12 de Octubre, Universidad Complutense (Pharmacology department, faculty of Medicine), Spanish Association for the development of the clinical epidemiology (AEDEC), National University at distance (UNED). I manage a team of one designer and one programmer.

31/08/2007 – 29/11/2007 Aachen, Germany

GUEST RESEARCHER. SOFTWARE ENGINEER / DEVELOPER- EHEALTH, PHILIPS RESEARCH,

Development and testing of a backend system to deliver a tele-monitoring service for people suffering from Heart Failure

31/08/2013 – 30/08/2015 Majadahonda (Madrid), Spain

CLINICAL ENGINEER - EHEALTH FUNDACIÓN HOSPITAL PUERTA DE HIERRO

Design and development of an electronic Clinical Report Form system to support a genetic bio-bank to study rare cardiac arrhythmias in 5 public hospitals of the Community of Madrid.

31/05/2013 – 27/02/2014 Bologna, Italy

HEAD HUNTER EXPERT IN THE AREA OF EHEALTH HIVEJOBS

Evaluation of positions in the area of Information technology for hospitals. I assessed the skills of the candidate and report to the clients that published the position. Remote work.

31/01/2009 – 30/03/2009 Aachen, Germany

GUEST RESEARCHER. SOFTWARE ENGINEER / DEVELOPER- EHEALTH, PHILIPS RESEARCH,

Technical follow up of the clinical study based in IT technology to monitor heart failure patients, preliminary requirement of a new architecture to support the rehabilitation of users that suffered a myocardial infarct.

31/12/2006 – 30/12/2011 Madrid, Spain

SOFTWARE ENGINEER EHEALTH UNIVERSIDAD POLITÉCNICA DE MADRID

Responsible of the specification and delivery of a Web server technology of a tele monitoring systems for cardiac patients (heart failure and arrhythmias management, cardiac rehabilitation).

EDUCATION AND TRAINING

31/05/2008 – 12/01/2016 Madrid, Spain

PHD BIOENGINEERING Universidad Politécnica de Madrid

Address Avenida Complutense s/n, 28040, Madrid, Spain | **Website** www.upm.es |

Field of study Bioengineering, human computer interaction, human factors, psychology, persuasive design |

Final grade Outstanding with Honours |

Thesis Persuasive system design methods to deliver a cardio-rehabilitation program of post mi outpatients

31/08/1997 – 14/12/2005 Pavia, Italy

M.SC. COMPUTER SCIENCE ENGINEERING. SPECIALISATION: BIOINFORMATICS Università degli studi di Pavia

Address Via Ferrata, 27100, Pavia, Italy | **Website** www.unipv.it

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
SPANISH	C2	C2	C2	C2	C2
ENGLISH	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office | Microsoft Word | Microsoft Excel | Microsoft Powerpoint | Outlook | Skype | Google Docs | Google Drive | Zoom | Facebook | Miro | Collaborative tools (Mural trello slido)

Research

designing questionnaire-based quantitative surveys (LimeSurvey); | MATLAB&Simulink | SPSS Statistical Tool

User centred design

Balsamic Mockup | Marvin Sketch | Adobe Fireworks | Expert in Coda (Coda.io) and Miro (Miro.com) | Prototype (Invision)

Programming

Java | PHP | GIT | Python programming | Javascript | MySQL | HTML

Network technology

Database servers | email servers | DNS | VMware | Docker | Web servers | FTP

Project Management

Teams | Asana | Slack | Basecamp

MANAGEMENT AND LEADERSHIP SKILLS

Overall innovation management

Project and product management :

- Experience in planning, monitoring the execution of the project. Risk analysis, conflict resolution, overall project assessment.
- I am adept with multiple project management methodologies for IT projects, Lean, Agile, Waterfall and Scrum.
- Administrative management: I have experience of managing the financial part of the European projects and to internally plan the use of the resources and budgets
- Innovation and business: market and innovation analysis, business development, competitor analysis
- Service design and problem-solving: creative approach on problem-solving. Experience on leading brainstorming workshops, co-design activities, interviews
- Ethnographic and quantitative methods: state of art, focus groups, surveys, usability and acceptability tests, biostatistics, clinical trials.
- Conceptualization and Prototyping: Creative process, Goal-Oriented Design, and Persuasive design.
- Consultancy for analysis and synthesis of complex problems related to the projects.

COMMUNICATION AND INTERPERSONAL SKILLS

Core skills

- Communication: ability to adapt the conversation to different type of audience. Experience in public lectures, round tables, conferences, audits, consultations and dissemination activities.
- Team leader, opinion leader.
- Facilitator of inclusive and easy going workplace.
- Empathic, prone to listen people and help them.
- Technologists, expert in the solution design
- Facilitator of brainstorming, focus groups, interviews and ethnographic research to design new product in the field of digital health.

PUBLICATIONS

Selected publications

Petros NG, Alvarsson-Hjort J, Hadlaczky G, Wasserman D, Ottaviano M, Gonzalez-Martinez S, Carletto S, Scilingo EP, Valenza G, Carli V. Predictors of the Use of a Mental Health-Focused eHealth System in Patients With Breast and Prostate Cancer: Bayesian Structural Equation Modeling Analysis of a Prospective Study. *JMIR Cancer*. 2023 Sep 12;9:e49775. doi: 10.2196/49775. PMID: 37698900; PMCID: PMC10523218.

Pala D, Parimbelli E, Larizza C, Cheng C, Ottaviano M, Pogliaghi A, Đukić G, Jovanović A, Milićević O, Urošević V, Cerchiello P, Giudici P, Bellazzi R. A New Interactive Tool to Visualize and Analyze COVID-19 Data: The PERISCOPE Atlas. *Int J Environ Res Public Health*. 2022 Jul 26;19(15):9136. doi: 10.3390/ijerph19159136. PMID: 35897503; PMCID: PMC9330557.

Petros NG, Hadlaczky G, Carletto S, Martinez SG, Ostacoli L, Ottaviano M, Meyer B, Scilingo EP, Carli V. Sociodemographic Characteristics Associated With an eHealth System Designed to Reduce Depressive Symptoms Among Patients With Breast or Prostate Cancer: Prospective Study. *JMIR Form Res*. 2022 Jun 8;6(6):e33734. doi: 10.2196/33734. PMID: 35675116.

Carli, Vladimir, Nuhamin Gebrewold Petros, Gergő Hadlaczky, Tereza Vitcheva, Paola Berchiolla, Silvia Bianchi, Sara Carletto, et al. "The NEVERMIND E-Health System in the Treatment of Depressive Symptoms among Patients with Severe Somatic Conditions: A Multicentre, Pragmatic Randomised Controlled Trial." *EclinicalMedicine* 48 (June 2022): 101423. <https://doi.org/10.1016/j.eclinm.2022.101423>.

Parimbelli E, Wilk S, Cornet R, Sniatala P, Sniatala K, Glaser SLC, Fraterman I, Boekhout AH, Ottaviano M, Peleg M. A review of AI and Data Science support for cancer management. *Artif Intell Med*. 2021 Jul;117:102111. doi: 10.1016/j.artmed.2021.102111. Epub 2021 May 24. PMID: 34127240.

E. Christinaki *et al.*, "Well-being Forecasting using a Parametric Transfer-Learning method based on the Fisher Divergence and Hamiltonian Monte Carlo," *EAI Endorsed Transactions on Bioengineering and Bioinformatics*, 2020.

V. Carli *et al.*, "A protocol for a multicentre, parallel-group, pragmatic randomised controlled trial to evaluate the NEVERMIND system in preventing and treating depression in patients with severe somatic conditions," *BMC psychiatry*, vol. 20, no. 1, pp. 1–10, 2020.

M. Ottaviano *et al.*, "Empowering citizens through perceptual sensing of urban environmental and health data following a participative citizen science approach," *Sensors*, vol. 19, no. 13, p. 2940, 2019.

A. Dagliati *et al.*, "A dashboard-based system for supporting diabetes care," *Journal of the American Medical Informatics Association*, vol. 25, no. 5, pp. 538–547, 2018.

D. Salvi *et al.*, "An m-Health system for education and motivation in cardiac rehabilitation: the experience of HeartCycle guided exercise," *Journal of telemedicine and telecare*, vol. 24, no. 4, 2018.

Link <https://www.scopus.com/authid/detail.uri?authorId=24723259500>

CONFERENCES

Selected proceedings in conferences

Urošević, V. et al. (2023). BRAINTEASER Architecture for Integration of AI Models and Interactive Tools for Amyotrophic Lateral Sclerosis (ALS) and Multiple Sclerosis (MS) Progression Prediction and Management. In: Jongbae, K., Mokhtari, M., Aloulou, H., Abdulrazak, B., Seungbok, L. (eds) Digital Health Transformation, Smart Ageing, and Managing Disability. ICOST 2023. Lecture Notes in Computer Science, vol 14237. Springer, Cham. https://doi.org/10.1007/978-3-031-43950-6_2

Parimbelli, Enea, et al. "Cancer Patients Better Life Experience (CAPABLE) First Proof-of-Concept Demonstration." In *Artificial Intelligence in Medicine*, edited by Allan Tucker et al., 12721:298–303. Lecture Notes in Computer Science. Cham: Springer International Publishing, 2021.

D. Vito, M. Ottaviano, M. F. Cabrera, J. G. Teriús Padrón, V. Casella, and R. Bellazzi, "Public Health Observatories: a learning community model to foster knowledge transfer for sustainable cities," 2020..

D. Vito *et al.*, "The PULSE Project: A Case of Use of Big Data Uses Toward a Comprehensive Health Vision of City Well Being," in *International Conference on Smart Homes and Health Telematics*, 2020.

L. Lopez-Perez *et al.*, "BD2Decide: big data and models for personalized head and neck cancer decision support," in *2019 IEEE 32nd International Symposium on Computer-Based Medical Systems (CBMS)*, 2019.

M. Ottaviano, M. F. Cabrera-Umpiérrez, and M. T. A. Waldmeyer, "PULSE: Participatory Urban Living for Sustainable Environment.," in *CBMS*, 2019.

M. Ottaviano *et al.*, "Participative app for citizen to assess health risks and increase pollution awareness," in *2019 IEEE EMBS International Conference on Biomedical & Health Informatics (BHI)*, 2019.

J.-A. Abraham *et al.*, "EPMA-World Congress 2015," in *EPMA Journal*, 2016, vol. 7, no. 1.

C. Vera-Muñoz, M. T. Arredondo, M. Ottaviano, D. Salvi, and W. Stut, "HeartCycle: user interaction and patient education," in *2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, 2013.

M. Ottaviano *et al.*, "Innovative self management system for guided cardiac rehabilitation," in *2011 Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, 2011.

C. Vera-Muñoz, M. T. Arredondo, I. Peinado, M. Ottaviano, J. M. Páez, and A. D. de Barrionuevo, "Results of the usability and acceptance evaluation of a cardiac rehabilitation system," in *International Conference on Human-Computer Interaction*, 2011.

M. Ottaviano, C. Vera-Muñoz, M. Arredondo, and D. Salvi, "A system to promote self-behaviors of patients with coronary heart disease," in *2010 Annual International Conference of the IEEE Engineering in Medicine and Biology*, 2010.

I. Peinado, M. T. Arredondo, E. Villalba, D. Salvi, and M. Ottaviano, "Patient interaction in homecare systems to treat cardiovascular diseases in the long term," in *International Conference of the IEEE Engineering in Medicine and Biology Society, Minneapolis*, 2009.

RESEARCH PROJECTS

Selection of project

In the last 19 years I've been involved in 30 research projects. Below I mention the ones in which I mostly worked. If requested I can provide official certificates with all my contributions.

- Improve (IHI Call3 - 101132847): technical manager of the project and responsible of the design of a system architecture to integrate patient generated health data to speed up the update, the evidence generation and the improvement of digital health technologies.
- Brainteaser (H2020-101017598): leader of the WP responsible of the co-design and development of clinical tools and patient apps to support the management, assessment of multiple sclerosis and amyotrophic lateral sclerosis.
- Capable (H2020-875052): leader of the WP of Business and exploitation, lead of User experience validation and health technology assessment.
- Periscope (H2020-101016233): leader of the ethics requirements, coordinator of the semantic development of the project's technology.

- Nevermind (H2020, GA# 689691): I lead a technical work package called "ICT Tools for Self-Management" that is responsible to design a real time decision support system to predict the risk of depressive episode and to deliver a personalized intervention to promote physical and emotional wellness of patients affected by severe somatic disease (cancer, kidney failure, coronary disease patient that suffered a myocardial infarct, uncontrolled diabetic patients that suffered leg amputations).
- Pulse (H2020, GA#727816): I lead the delivery of a gamefied app for citizen and of a City Observatory for the 5 project test beds (Barcelona, New York, Singapore, Paris and Birmingham).
- B2Decide (H2020, GA#689715): design of architectural patterns of a Big Data solution to improve the diagnostic and prognostic of Head and Neck Cancer. I mentor the development of the analytical tools.
- ActivAge (H2020, GA#732679) definition of an interoperable platform to support large scale pilots in the domain of IoT and Active and Healthy Aging.
- DatStudy (Spanish national project FIS): design and development of a electronic Clinical Form to study of the effects of the antithrombotic drugs and the risk of thrombotic and bleeding event in patients that have been hospitalized for a percutaneous coronary intervention.
- AMTE (Spanish national research project with grant #PSI2013-44480-P): Specification and delivery of online intervention tool based on Cognitive Behavioural Therapy for pupils with anxiety and depression disorders.
- Psyche (FP7-247777): I've been the manager of a technical work package called User and Professional Interface. In this project I manage a team in charge to design and develop an app to help bipolar patients to be more in control of the health status and a Web portal for health professional to manage the health status of the patients.

● **JOINT COLLABORATION WITH SCIENTIFIC JOURNAL AND CONFERENCES**

01/01/2019 – CURRENT

Reviewer contribution in journals and conferences

Review editor of:

- IEEE Journal of Biomedical and Health Informatics
- SAGE Open
- Frontiers in Digital Health (section Connected Health)
- Conference Computational Intelligence Methods for Bioinformatics and Biostatistics 2021

Co-organiser of 32nd IEEE CBMS International Symposium on Computer-Based Medical Systems (2019).